

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CANAAN STREET LAKE	Lake Area (ha):	122.62
Town: CANAAN	Maximum depth (m):	6.7
County: Grafton	Mean depth (m):	3.4
River Basin: Connecticut	Volume (m <sup>3</sup> ):	4146500
Latitude: 43°40'00" N	Relative depth:	0.5
Longitude: 72°02'00" W	Shore configuration:	1.63
Elevation (ft): 1142	Areal water load (m/yr):	2.37
Shore length (m): 6400	Flushing rate (yr <sup>-1</sup> ):	0.70
Watershed area (ha): 635.6	P retention coeff.:	0.79
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

		8 January 1991	19 July 1990
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 85%	ASTERIONELLA 80%
	#2	DINOBRYON 15%	TABELLARIA 10%
	#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)			870.0
CHLOROPHYLL-A (µg/L)			2.54
DOM. ZOOPLANKTON (% TOTAL)	#1	NO DOMINANT	KERATELLA 36%
	#2		KELLICOTTIA 22%
	#3		NAUPLIUS LARVA 22%
ROTIFERS/LITER		31	109
MICROCRUSTACEA/LITER		12	72
ZOOPLANKTON ABUNDANCE (#/L)		43	183
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			4.0
BOTTOM DISSOLVED OXYGEN (mg/L)		8.5	0.3
BACTERIA (fecal col., #/100 ml)	#1		< 10
	#2		< 10
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : 34000

**CHEMICAL:**

Lake: CANAAN STREET LAKE  
Town: CANAAN

	8 January 1991		19 July 1990		
DEPTH (m)	2.0	4.0	2.0		4.0
pH (units)	7.2	7.2	7.2		7.2
A.N.C. (Alkalinity)	11.1	10.8	9.9		9.5
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.43	0.43			0.34
TOTAL PHOSPHORUS	0.010	0.011	0.009		0.010
CONDUCTIVITY ( $\mu$ mhos/cm)	56.5	57.4	53.0		53.7
APPARENT COLOR (cpu)	8	8	16		18
MAGNESIUM			0.78		
CALCIUM			4.6		
SODIUM			3.8		
POTASSIUM			0.50		
CHLORIDE	5	5	5		5
SULFATE	5	5	4		4
TN : TP	43	39			34
CALCITE SATURATION INDEX			2.4		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1990**

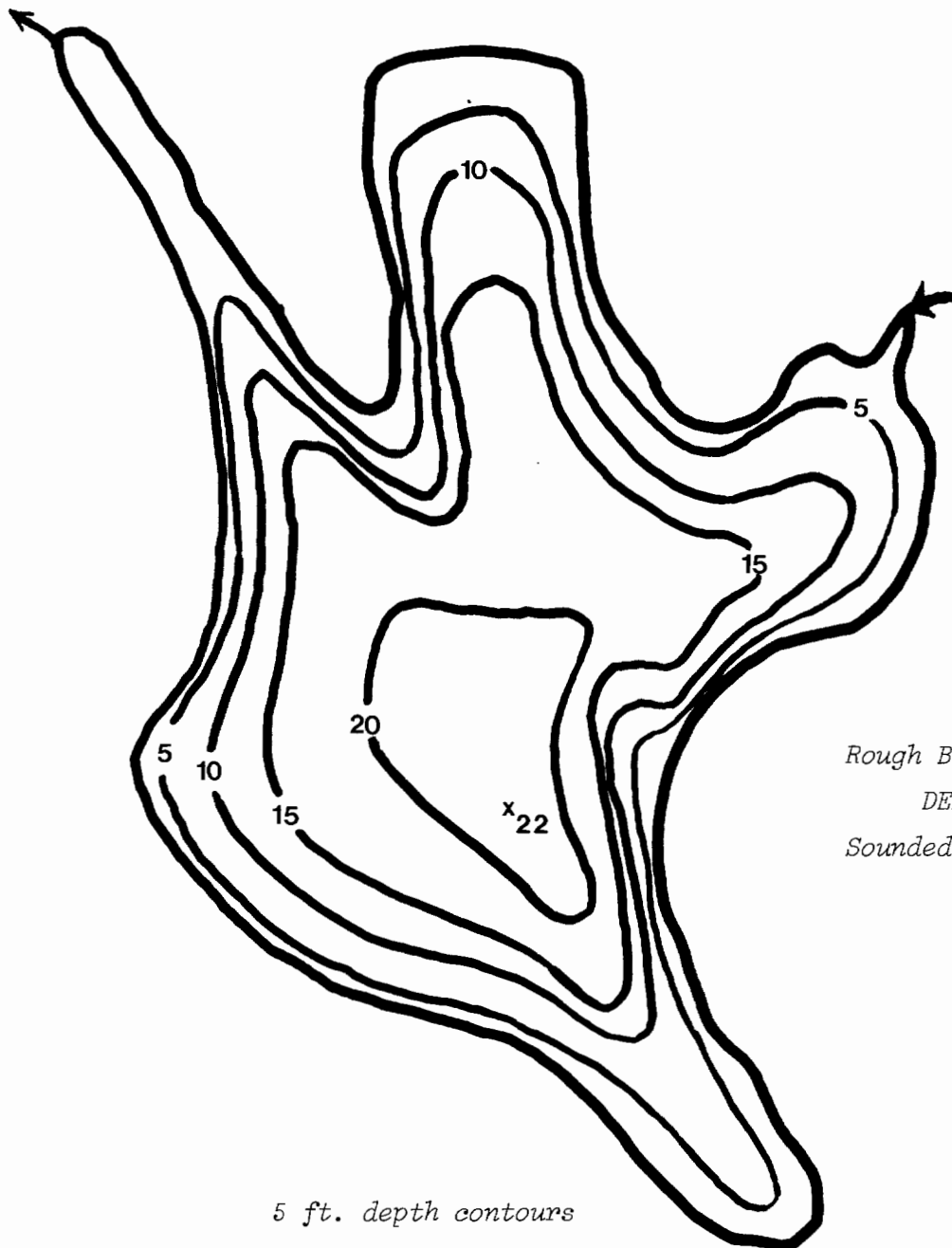
D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	1	0	3	Oligo.

**COMMENTS:**

1. Also known as Crystal Lake.
2. This lake is the public water supply for the Town of Canaan. The intake pipe is located in the southern cove, and this area of the lake is off limits to boating and swimming.
3. A shallow boat launch site is located adjacent to the town beach; parking is limited.
4. The lake has a town beach and beaches associated with Cardigan Mountain School and a campground.
5. This lake was previously surveyed in 1979. There was no change in its trophic state.
6. Dominant genera of wholewater phytoplankton were Aphanocapsa (25%), Chroomonas (15%) and tiny green flagellates (15%).

# CANAAN STREET LAKE

CANAAN

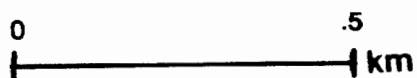


*Rough Bathymetric Chart*

*DES - 1990*

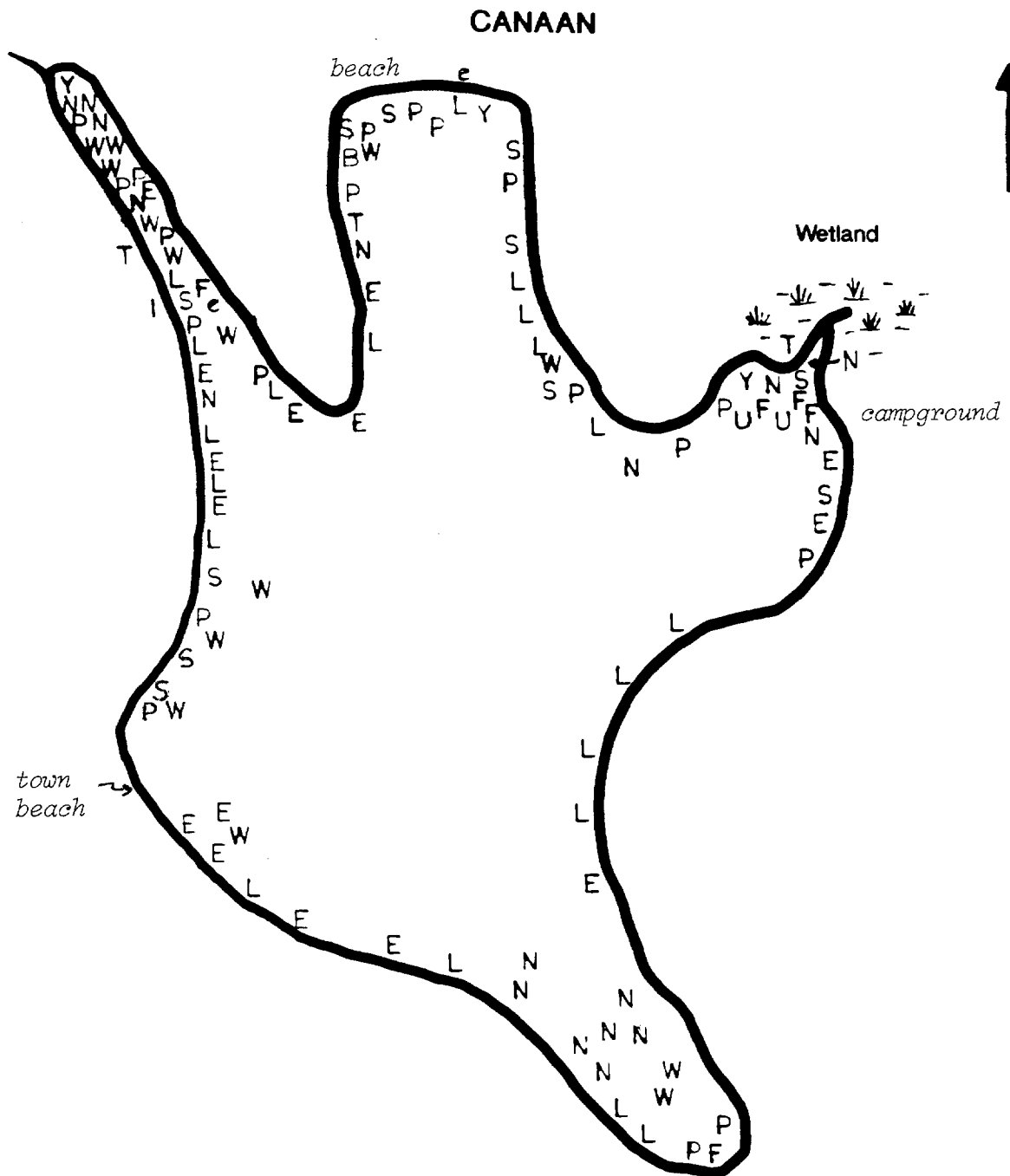
*Sounded by Fathometer*

*5 ft. depth contours*



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# CANAAN STREET LAKE



Aquatic Plant Distribution Map

[illegible]